Virginia Grade Level Alternative Worksheet

Grade 3 Science

Check all that apply:

_____ Assigned scores have been entered into the online VGLA System.

_____ Assigned scores have been verified and submitted for final scoring in the online VGLA System.

Student's Name:_____ Student's Number:_____.

An "X" under No Evidence represents a Total of 0.

Reporting Category	SOL #	Specific Virginia Standard of Learning	Demonstrated (0 to 4)	Inferred (0 to 4)	No Evidence (0)	Total (0 to 4)
RC 1	K.1	The student will conduct investigations in which a) basic properties of objects are identified by direct observation; b) observations are made from multiple positions to achieve different perspectives; c) a set of objects is sequenced according to size; d) a set of objects is separated into two groups based on a single physical attribute; e) picture graphs are constructed using 10 or fewer units; f) nonstandard units are used to measure common objects; g) an unseen member in a sequence of objects is predicted; h) a question is developed from one or more observations; i) objects are described both pictorially and verbally; and j) unusual or unexpected results in an activity are recognized.				
RC 1	K.2	The student will investigate and understand that humans have senses including sight, smell, hearing, touch, and taste. Senses allow one to seek, find, take in, and react or respond to information in order to learn about one's surroundings. Key concepts include a) five senses (taste, touch, smell, hearing, and sight); b) sensing organs associated with each of the senses (eyes, ears, nose, tongue, and skin); and c) sensory descriptors (sweet, sour, bitter, salty, rough, smooth, hard, soft, cold, warm, hot, loud, soft, high, low, bright, dull).				
RC 1	1.1	The student will plan and conduct investigations in which a) differences in physical properties are observed using the senses and simple instruments to enhance observations (magnifying glass); b) objects or events are classified and arranged according to attributes or properties; c) observations and data are communicated orally and with simple graphs, pictures, written statements, and numbers; d) length, mass, and volume are measured using standard and nonstandard units; e) inferences are made and conclusions are drawn about familiar objects and events; f) predictions are based on patterns of observation rather than random guesses; and g) simple experiments are conducted to answer questions.				
RC 1	2.1	The student will plan and conduct investigations in which a) observations are repeated to improve accuracy; b) two or more attributes are used to classify items; c) pictures and bar graphs are constructed using numbered axes; d) linear, volume, mass, and temperature measurements are made in metric (centimeters, meters, liters, degrees Celsius, grams, kilograms) and standard English units (inches, feet, yards, pints, quarts, gallons, degrees Fahrenheit, ounces, pounds); e) observation is differentiated from personal interpretation, and conclusions are drawn based on observations; f) simple physical models are constructed; g) conditions that influence a change are defined; and h) unexpected or unusual quantitative data are recognized.				

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RC 1	3.1	The student will plan and conduct investigations in which a) questions are developed to formulate hypotheses; b) predictions and observations are made; c) data are gathered, charted, and graphed; d) objects with similar characteristics are classified into at least two sets and two subsets; e) inferences are made and conclusions are drawn; f) natural events are sequenced chronologically; g) length is measured to the nearest centimeter; h) mass is measured to the nearest gram; i) volume is measured to the nearest milliliter and liter; j) temperature is measured to the nearest degree Celsius; and k) time is measured to the nearest minute.				
RC 2	K.3	The student will investigate and understand that magnets have an effect on some materials, make some things move without touching them, and have useful applications Key concepts include a) attraction/nonattraction, push/pull, attract/repel, and metal/nonmetal; and b) useful applications (refrigerator magnet, can opener, magnetized screwdriver).				
RC 2	K.4	The student will investigate and understand that objects can be described in terms of their physical properties. Key concepts include a) the eight basic colors; b) shapes (circle, triangle, square) and forms (flexible, stiff, straight, curved); c) textures and feel (rough, smooth, hard, soft); d) relative size and weight (big, little, large, small, heavy, light, wide, thin, long, short); and e) position and speed (over, under, in, out, above, below, left, right, fast, slow).				
RC 2	K.5	The student will investigate and understand that water has properties that can be observed and tested. Key concepts include a) water occurs in different forms (solid, liquid, gas); b) the natural flow of water is downhill; and c) some materials float in water while others sink.				
RC 2	1.2	The student will investigate and understand that moving objects exhibit different kinds of motion. Key concepts include a) objects may have straight, circular, and back and forth motions; b) objects vibrate; c) pushes or pulls can change the movement of an object; and d) the motion of objects may be observed in toys and in playground activities.				
RC 2	1.3	The student will investigate and understand how different common materials interact with water. Key concepts include a) some common liquids (vinegar) mix with water, others (oil) will not; b) some everyday solids (baking soda, powdered drink mix, sugar, salt) will dissolve, others (sand, soil, rocks) will not; and c) some substances will dissolve easily in hot water rather than cold water.				
RC 2	2.2	The student will investigate and understand that natural and artificial magnets have certain characteristics and attract specific types of metals. Key concepts include a) magnetism, iron, magnetic/nonmagnetic, opposites, poles, attract/repel; and b) important applications including the magnetic compass.				

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RC 2	2.3	The student will investigate and understand basic properties of solids, liquids, and gases. Key concepts include a) mass and volume; and b) processes involved with changes in matter from one state to another (condensation, evaporation, melting, freezing, expanding, and contracting).				
RC 2	3.2	The student will investigate and understand simple machines and their uses. Key concepts include a) types of simple machines (lever, screw, pulley, wheel and axle, inclined plane, and wedge); b) how simple machines function; and c) examples of simple machines found in the school, home, and work environment.				
RC 2	3.3	The student will investigate and understand that objects can be described in terms of the materials they are made of and their physical properties. Key concepts include a) objects are made of smaller parts; b) materials are composed of parts that are too small to be seen without magnification; and c) physical properties remain the same as the material is reduced in size.				
RC 3	K.6	The student will investigate and understand basic needs and life processes of plants and animals. Key concepts include a) living things change as they grow and need food, water, and air to survive; b) plants and animals live and die (go through a life cycle); and c) offspring of plants and animals are similar but not identical to their parents and one another.				
RC 3	1.4	The student will investigate and understand that plants have life needs and functional parts and can be classified according to certain characteristics. Key concepts include a) needs (food, air, water, light, and a place to grow); b) parts (seeds, roots, stems, leaves, blossom, fruit); and c) characteristics: edible/nonedible, flowering/nonflowering, evergreen/deciduous.				
RC 3	1.5	The student will investigate and understand that animals, including people, have life needs and specific physical characteristics and can be classified according to certain characteristics. Key concepts include a) life needs (air, food, water, and a suitable place to live); b) physical characteristics (body coverings, body shape, appendages, and methods of movement); and c) characteristics (wild/tame, water homes/land homes).				
RC 3	2.4	The student will investigate and understand that plants and animals go through a series of orderly changes in their life cycles. Key concepts include a) some animals (frogs and butterflies) go through distinct stages during their lives while others generally resemble their parents; and b) flowering plants undergo many changes from the formation of the flower to the development of the fruit.				
RC 3	2.5	The student will investigate and understand that living things are part of a system. Key concepts include a) living organisms are interdependent with their living and nonliving surroundings; and b) habitats change over time due to many influences.				

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RC 3	2.7	The student will investigate and understand that weather and seasonal changes affect plants, animals, and their surroundings. Key concepts include a) effects on growth and behavior of living things (migration, estivation, hibernation, camouflage, adaptation, dormancy).				
RC 3	2.8	The student will investigate and understand that plants produce oxygen and food, are a source of useful products, and provide benefits in nature. Key concepts include a) important plant products (fiber, cotton, oil, spices, lumber, rubber, medicines, and paper); b) the availability of plant products affects the development of a geographic area; and c) plants provide homes and food for many animals and prevent soil from washing away.				
RC 3	3.4	The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs. Key concepts include a) methods of gathering and storing food, finding shelter, defending themselves, and rearing young; and b) hibernation, migration, camouflage, mimicry, instinct, and learned behavior.				
RC 3	3.5	The student will investigate and understand relationships among organisms in aquatic and terrestrial food chains. Key concepts include a) producer, consumer, decomposer; b) herbivore, carnivore, omnivore; and c) predator - prey.				
RC 3	3.6	The student will investigate and understand that environments support a diversity of plants and animals that share limited resources. Key concepts include a) water-related environments (pond, marshland, swamp, stream, river, and ocean environments); b) dry-land environments (desert, grassland, rainforest, and forest environments); and c) population and community.				
RC 3	3.10	The student will investigate and understand that natural events and human influences can affect the survival of species. Key concepts include a) the interdependency of plants and animals.				
RC 4	K.7	The student will investigate and understand that shadows occur when light is blocked by an object. Key concepts include a) shadows occur in nature when sunlight is blocked by an object; and b) shadows can be produced by blocking artificial light sources.				
RC 4	K.8	The student will investigate and understand simple patterns in his/her daily life. Key concepts include a) weather observations; b) the shapes and forms of many common natural objects including seeds, cones, and leaves; c) animal and plant growth; and d) home and school routines.				
RC 4	K.9	The student will investigate and understand that change occurs over time, and rates may be fast or slow. Key concepts include a) natural and human-made things may change over time; and b) changes can be noted and measured.				

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RC 4	K.10	The student will investigate and understand that materials can be reused, recycled, and conserved. Key concepts include a) identifying materials and objects that can be used over and over again; b) describing everyday materials that can be recycled; and c) explaining how to conserve water and energy at home and in school.				
RC 4	1.6	The student will investigate and understand the basic relationships between the sun and the Earth. Key concepts include a) the sun is the source of heat and light that warms the land, air, and water; and b) night and day are caused by the rotation of the Earth.				
RC 4	1.7	The student will investigate and understand the relationship of seasonal change and weather to the activities and life processes of plants and animals. Key concepts include how temperature, light, and precipitation bring about changes in a) plants (growth, budding, falling leaves, wilting); b) animals (behaviors, hibernation, migration, body covering, habitat); and c) people (dress, recreation, work).				
RC 4	1.8	The student will investigate and understand that natural resources are limited. Key concepts include a) identification of natural resources (plants and animals, water, air, land, minerals, forests, and soil); b) factors that affect air and water quality; c) recycling, reusing, and reducing consumption of natural resources; and d) use of land as parks and recreational facilities.				
RC 4	2.6	The student will investigate and understand basic types and patterns of weather. Key concepts include a) temperature, wind, condensation, precipitation, drought, flood, and storms; and b) the uses and importance of measuring and recording weather data.				
RC 4	2.7	The student will investigate and understand that weather and seasonal changes affect plants, animals, and their surroundings. Key concepts include b) weathering and erosion of the land surface.				
RC 4	3.7	The student will investigate and understand the major components of soil, its origin, and importance to plants and animals including humans. Key concepts include a) soil provides the support and nutrients necessary for plant growth; b) topsoil is a natural product of subsoil and bedrock; c) rock, clay, silt, sand, and humus are components of soils; and d) soil is a natural resource and should be conserved.				
RC 4	3.8	The student will investigate and understand basic sequences and cycles occurring in nature. Key concepts include a) sequences of natural events (day and night, seasonal changes, phases of the moon, and tides); and b) animal and plant life cycles.				

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RC 4	3.9	The student will investigate and understand the water cycle and its relationship to life on Earth. Key concepts include a) the origin of energy that drives the water cycle; b) processes involved in the water cycle (evaporation, condensation, precipitation); and c) water supply and water conservation.				
RC 4	3.10	The student will investigate and understand that natural events and human influences can affect the survival of species. Key concepts include b) human effects on the quality of air, water, and habitat; c) the effects of fire, flood, disease, erosion, earthquake, and volcanic eruption on organisms; and d) conservation, resource renewal, habitat management, and species monitoring.				
RC 4	3.11	The student will investigate and understand different sources of energy. Key concepts include a) the sun's ability to produce light and heat energy; b) natural forms of energy (sunlight, water, wind); c) fossil fuels (coal, oil, natural gas) and wood; d) electricity, nuclear power; and e) renewable and nonrenewable resources.				

Reporting Category Key
RC 1 Scientific Investigation
RC 2 Force, Motion, Energy, and Matter
RC 3 Life Processes and Living Systems
RC 4 Earth/ Space Systems and Cycles